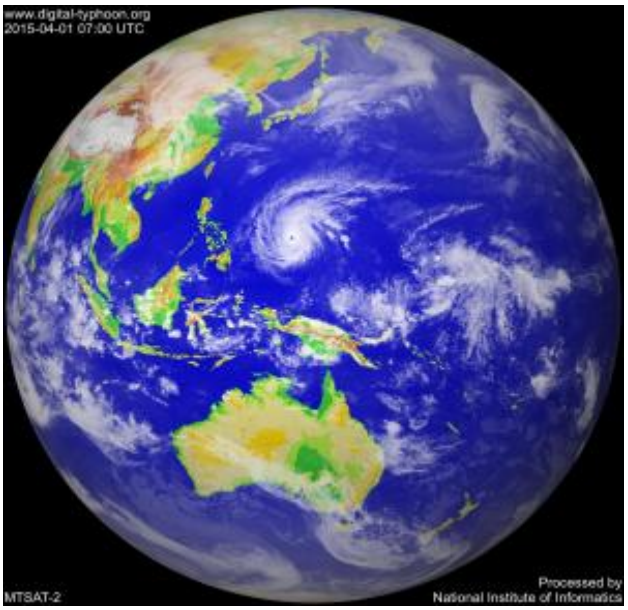
Powerful super-typhoon heads for Philippines

Description

There is currently a super typhoon in the western North Pacific called Maysak. This is a particularly strong storm for the time of year with winds in excess of 160 mph. The strongest storms in this region usually occur between August and October. Tropical storms, including typhoons, are reliant on sea surface temperatures for their energy, and as the northern hemisphere has just moved from winter to spring, this is the coldest time of year for sea temperatures. However, in the region where Typhoon Maysak formed just north of the equator, sea temperatures are almost always above 26°C, which is the critical value for tropical storm formation. Furthermore, the sea temperatures are unusually warm in this area by more than 2°C.

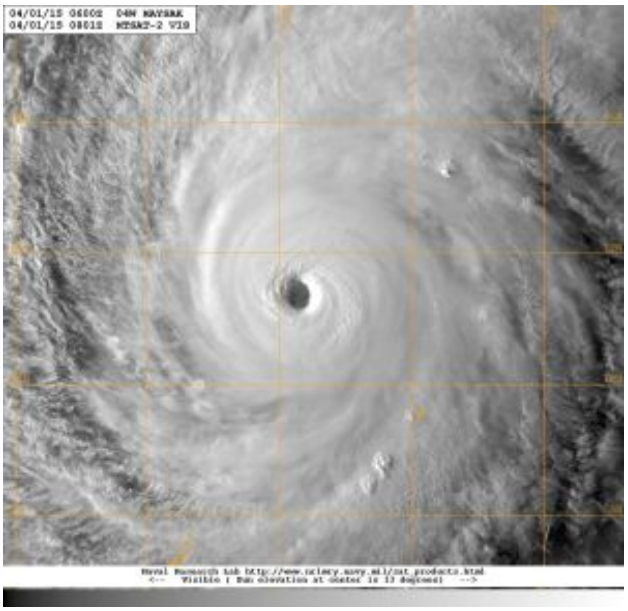
Super Typhoon Maysak is the fourth tropical storm of the season in the western North Pacific, the others being Mekkhala, Higos and Bavi. There has not been a year with four or more tropical storms in this region forming before the end of March since 1965. Three of the four storms have been typhoons – only Bavi remained below the 74mph threshold (the sustained wind speed required to become a typhoon). There have never been as many typhoons before the end of March in the era of reliable records (since World War II). Maysak was also the strongest typhoon to develop in March in this region since Mitag in 2002.



Typhoon Maysak as seen from the MTSAT satellite on 1 April 2015
Image courtesy of digital-typhoon.org

Maysak has now started to weaken as it moves west-northwest towards the Philippines. However, Maysak is still likely to be a typhoon when it makes landfall this weekend. There is still some uncertainty over the exact track of the storm, but the most probable path suggests the Philippines'

northern island, Luzon, is most at risk – including the capital Manila. Wind damage and flooding are likely, particularly in coastal areas.



Typhoon Maysak on 1 April 2015.
Image courtesy of the US Naval Research Laboratory

The Eye of the Storm

Air sinks at the centre of a typhoon, resulting in the formation of an ‘eye’ which is sometimes free of cloud and mostly calm. However, on occasions small scale rotations can develop within the eye causing distinctive ‘mesovortices’ (small scale columns of rotating air) in the low level cloud pattern. These can be seen in this satellite loop of Typhoon Maysak created by the Cooperative Institute for Meteorological Satellite Studies at the University of Wisconsin:

http://cimss.ssec.wisc.edu/goes/blog/wp-content/uploads/2015/03/MAYSAK_H8VIS_064_31March_end0600_fast.gif

The Met Office works closely with counterparts at the Philippines weather service PAGASA, providing the latest information on computer model predictions of the likely track and intensity of Typhoon Maysak as it nears the country.

Official warnings of west Pacific tropical storms are produced by the Japan Meteorological Agency. The Met Office routinely supplies predictions of cyclone tracks from its global forecast model to regional meteorological centres worldwide, which are used along with guidance from other models in the production of forecasts and guidance.

Met Office StormTracker provides a mapped picture of tropical cyclones around the globe, with access to track history and six-day forecast tracks for current tropical cyclones from the Met Office global forecast model, as well as the latest observed cloud cover and sea surface temperature. We also provide updates on current tropical storms via @metofficestorms on Twitter.

Date Created

April 2015

UV levels over 2015 Easter holidays

Description

Updated Tuesday 7 April 2015

At this time of year, despite still feeling quite cool, the sun can be as strong as it is in September. The UK often experiences higher than normal UV levels in April and May as a result of ozone anomalies, where pockets of low ozone move across the UK. This means that there is a higher chance than normal of getting sunburnt in prolonged spells of sunshine.

The main factors affecting the strength of UV radiation reaching the Earth's surface are:

- the time of year
- the latitude
- the amount of cloud, dust and pollution in the atmosphere
- the amount of ozone gas in the stratosphere

The first three of these four factors are well-represented in our model, and so for the vast majority of the year, the UV forecast gives excellent guidance. However, the amount of ozone is currently modelled on climatology, i.e. the average concentration for the time of year. The presence of ozone in the stratosphere is important because it absorbs much of the UV radiation before it reaches even the top of the highest clouds in the atmosphere.

Our forecast for UV for this week is indicating generally moderate levels, however there is a possibility that where it is sunny or where the cloud is thin, UV levels may, in fact, be higher than forecast. UV can also be stronger at higher altitudes, so be aware and prepared if hill walking or mountain climbing this week.

If you are in an area that is sunny, make sure you take steps to ensure that you and your loved ones enjoy the sunshine safely, particularly as your skin may not be acclimatised to sunshine after the long winter months.

You can check the current levels of UV on the DEFRA Monitoring pages.

For more information on UV and ozone, visit our learning pages:

- http://www.metoffice.gov.uk/learning/learn-about-the-weather/weather-phenomena/uv-levels
- http://www.metoffice.gov.uk/health

Date Created
April 2015

More warm weather this week – but what's in store for the summer?

Description

This week is set to see some unseasonably warm weather for parts of the UK – with temperatures expected to climb to the low to mid-20s Celsius in the south on Tuesday and Wednesday.

Warm air flowing up from the south west will combine with high pressure, bringing settled conditions and sunny spells for many.

Warmest days of the year so far

This week's above average temperatures follow on from a similar spell last week, which saw temperatures top out at 21.9C at St James's Park in London on Friday.

This was the 'warmest day of the year so far', but It looks like Tuesday and Wednesday will top that – which is to be expected as we head through spring and edge closer to the start of summer.

Unfortunately, the weather we get in April doesn't necessarily tell us anything about the kind of summer we can expect. We're still in the midst of spring, so it's far too early to say what the months of June, July and August may hold.

Summer 'heatwave' speculation

That hasn't stopped speculation about heatwaves, the warmest summer ever and record temperatures in the media. Some stories cite our three month outlook for contingency planners as proof of the impending heatwave, but this is in no way an accurate reflection of what it shows.

The outlook shows probabilities attached to different scenarios for temperature and rainfall over the whole three-month period it covers. This is useful for those who use probabilities to plan ahead on longer-timescales, but not very useful for deciding where and when to go on your UK summer holiday, for example.

What does the longer outlook show?

Our current three month outlook does show that above average temperatures are more likely than below average temperatures for the April-June period. The outlook is essentially the scientific equivalent of factoring the odds on a horse race and, just like a horse race, the favourite doesn't always win.

It's also important to note that above average temperatures over a three-month period could come about in a variety of ways in terms of actual weather – we can still see warmer than average temperatures when it's cloudy and wet, for example. Also, even in an above average three-months not all individual months would need to be above average.

This just reinforces the point that the contingency planners outlook doesn't tell us what specific weather

we are going to see at a specific location. For the best information on the weather ahead, people should use the Met Office's 5-day weather forecast supplemented with our 30-day outlook.

By keeping up to date with the latest forecast, you'll always have the most up-to-date and accurate view of the weather in store for the UK.

Date Created
April 2015

First half of April has been dry and warm

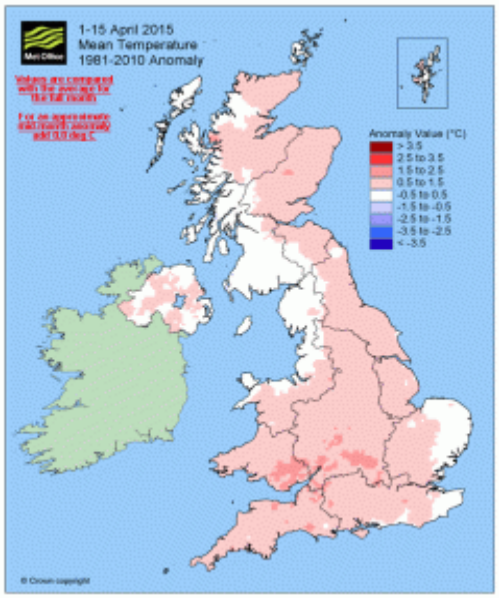
Description

Early statistics up to the 15th of April show that month so far has been generally settled and warm, with limited rainfall in most areas.

The mean temperature for the UK was 8.2C, which is 0.8C above the long-term (1981-2010) average for the whole month.

Daytime temperatures have risen to well above average in many areas, especially in the south, with the year's highest temperature so far of 25.1C recorded at Frittenden in Kent on the afternoon of the 15th. This is the highest April temperature anywhere in the UK since 2011.

The UK as a whole has seen average maximum temperatures 1.4C above normal, though much closer to average in coastal parts of northwest England and western Scotland.



Map shows the UK mean temperature for 1-15 April compared to the whole month average.

Rainfall has been well below normal so far in most areas. After 15 days of the month you'd expect about 50% of the full-month average to have fallen in a 'normal' April, but the UK has seen just 35% (25.2mm). However, there was some persistent and heavy rain across parts of northwest Scotland on 13th and 14th, and parts of western Scotland have had most of the whole-month average already.

It has also been rather a sunny month so far for most parts of the UK, with 63% of the full-month average already – again you would expect around 50% by mid-month.

The forecast for this weekend is for a good deal of dry and bright weather. However, it's still far too early to judge how this April will finish overall, with half of the month still to add in to the statistics.

	Mean Temperature		Sunshine hours		Rainfall	
1-15 Apr	**Actual**	**Diff to Avg**	**Actual**	**% of Avg**	**Actual**	**% of Avg**
	degC	**degC**	**hours**	**%**	**mm**	**%**
UK	12.9	1.4	92.8	63	25.2	35
England	14.0	1.6	98.4	63	14.1	24
Wales	13.5	1.9	92.0	60	20.1	22
Scotland	10.8	1.1	85.8	64	43.7	48
N Ireland	12.8	1.2	81.5	56	32.6	44

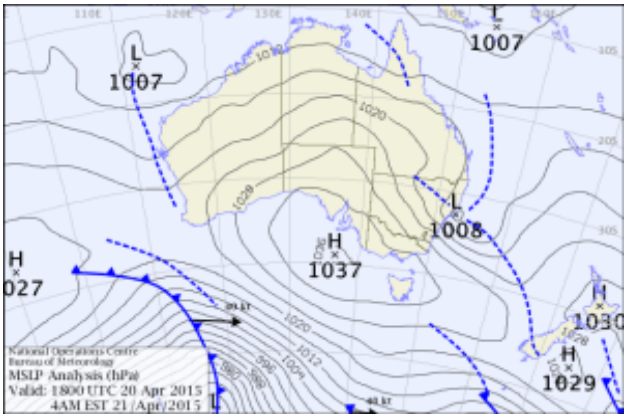
Data from the Met Office's UK digitised records dating back to 1910. You can explore our climate data on our website. Clearly these are early month figures and the statistics at the end of the month will change somewhat.

Date Created
April 2015

Intense storm threatens Sydney

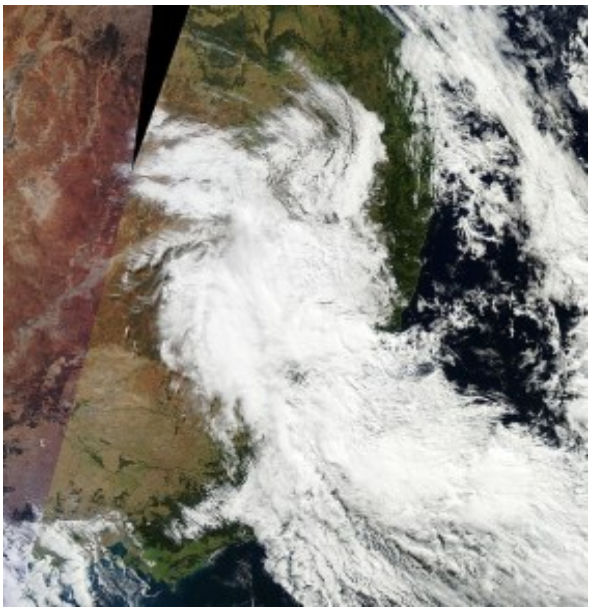
Description

Parts of New South Wales in southeast Australia have had severe flooding and wind damage over the past few days due to an intense low pressure system. Parts of the region have already seen more than 300mm (around a foot) of rainfall. Areas around Sydney have been affected, with flooding claiming three lives and causing evacuations of properties, as well as disrupting power and transport. Officials warned that hundreds of homes in the city are under threat from rising river levels, and it has been reported that the State Emergency Service (SES) have received nearly 10,000 calls for help and carried out more than 100 rescues.



Analysis chart from Austrlian Bureau of Meteorology

The storm is now weakening and moving away southeastwards into the Tasman Sea, so conditions are expected to improve over the next 24 hours, however remnants of the system are likely to bring a further 50 to 75mm of rainfall to some coastal parts today, before conditions gradually become quieter.


Rapid Response image from NASA

For more information on current warnings and forecasts across New South Wales, visit the Australian Bureau of Meteorology website.

Date Created
April 2015

Anniversary of the death of FitzRoy – founding father of the Met Office

Description

Vice Admiral Robert Fitzroy

Today (30th April) is the 150th anniversary of the death of Vice Admiral Robert FitzRoy, the founder of the Met Office. FitzRoy joined the Navy when he was just 12 years old and made his name as commander of several ships including *HMS Beagle*, made famous by the voyages of Charles Darwin. FitzRoy met Darwin in 1831 inviting him aboard the Beagle, as a fellow gentleman, to keep him company during the long journey, thus changing the course of history forever. Today the voyage of the Beagle is synonymous with Darwin, however, as the ship's captain, FitzRoy played a crucial role in the journey. *FitzRoy* became an MP during the 1840s and introduced a Bill dramatically improving safety at sea by introducing qualifications for ships masters and mates. FitzRoy continued to advance his naval career and was appointed Director of the Meteorological Office in 1854. **The dawn of weather forecasting**

THE WEATHER.

METEOROLOGICAL REPORTS.

First Daily Weather forecast, The Times, 1 Aug 1861

Following the disastrous Royal Charter Storm of October 1859, FitzRoy lobbied for permission to establish a Gale Warning Service for the protection of shipping. Observations from stations around the British Isles were sent to London and gale warnings were issued when necessary. Using a system of cones and drums, the direction from which the gale would strike was displayed for ships both in port and passing along the coast. Possibly the first national forecasting and warning system in the world the service continues to this day as the 'Shipping Forecast'. FitzRoy felt that 'prediction' and 'foretelling' sounded too unscientific for a process based on the developing science of meteorology so he coined the term 'weather forecast'. His first public weather forecast, published in his own hand writing, was published in the Times on 1 August 1861. Although he had been given Government backing to establish a Gale Warning service, FitzRoy had no permission to establish public forecasts, nevertheless they were very popular. Queen Victoria used to contact FitzRoy for forecasts a few days before making journeys to Osborne House on the Isle of Wight. Indeed, on the last day he attended the office it was to telegraph a forecast to the Queen. **Scientific and meteorological work** FitzRoy felt strongly that not enough was done to protect the lives of sailors and fishermen and he devised a new barometer for use in fishing harbours. They were placed where all could see them and were designed to be easy to read and interpret, FitzRoy's barometers were credited with saving hundreds of lives and FitzRoy paid for many of them himself, exhausting his own personal fortune. A few barometers survive in situ at fishing ports around the British Isles, including Mousehole in Cornwall. FitzRoy's *The Weather Book: A manual of practical meteorology*, written during a Summer Holiday in 1863, was a leading work on meteorological science and techniques and marked the beginning of an era of major advances in meteorology and guided the science into the 20th century. **Death and legacy** FitzRoy was a pioneer of meteorology and forecasting and was, in many ways, a man ahead of his time. A workaholic who once declared, 'I'd rather wear out than rust out', FitzRoy increasingly struggled with depression. The pressure of work and criticism took a severe toll on his health and, on 30 April 1865, FitzRoy took his own life. He was buried in unconsecrated ground within the front churchyard of All Saint's Church, Upper Norwood. His entire fortune of £6,000 (equivalent to around £400,000 today) had been exhausted on public service. FitzRoy was the world's first full-time weather forecaster. As a pioneering

meteorologist and founding father of the Met Office, FitzRoy made accurate weather forecasting a reality. To this day, the Met Office is proud of this outstanding scientific legacy and strives to continue operating at the forefront of scientific discovery.

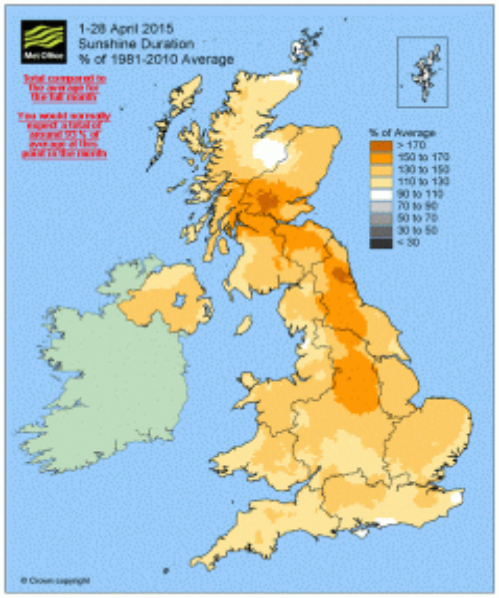
Date Created
April 2015

Sunny and dry April

Description

UPDATE: YOU CAN SEE AN UPDATED STORY ON APRIL'S WEATHER ON OUR WEBSITE.

The early April figures (1st – 28th April) show it was a sunny and warm month over all, with well above average sunshine almost everywhere. At the moment it ranks as the fifth sunniest April across the UK as a whole. Some locations, particularly in the East of the country, have so far seen almost 50% more sunshine than average. East Scotland has had its sunniest April on record, beating 1942's 200 hours of sunshine by 2 hours and it was the second sunniest for England East and NE with 212.4 – just behind 2011 with 216.9 5 hours.



April Sunshine Anomaly 1981-2010

Mean temperatures for the month have been also mostly above average. The mean temperature for the UK was 8.0 C, which is 0.6C above the long-term (1981-2010) average for the whole month. Daytime temperatures rose above average in many areas, especially in the south, with the year's highest temperature so far (25.6 °C) recorded at Faversham (Kent) on the afternoon of the 15th. This is the highest April temperature anywhere in the UK since 2011.

However, in contrast, under often clear skies, minimum temperatures have been near or below average, particularly in Northern Ireland and parts of northern England and southern Scotland. Katesbridge (County Down) recorded -8.0 °C on 27th April.

Mean Temperature **Sunshine hours** **Rainfall**

April 2015	Actual	Diff to Avg	Actual	% of Avg	Actual	% of Avg
	degC	degC	hours	%	mm	%
UK	8.0	0.6	199.2	135	41.6	57
England	8.9	0.8	209.1	135	23.3	40
Wales	8.5	0.9	203.3	132	32.4	36
Scotland	6.4	0.3	183.0	136	72.2	79
N Ireland	7.7	0.1	193.2	132	52.8	70

April has been a dry month, particularly across the southern half of the UK with only a third, to a half, of normal rainfall quite widely and less than 20% in some places.

Data from the Met Office's UK digitised records dating back to 1910. You can explore our climate data on our website. Clearly these are early month figures and the statistics at the end of the month will change somewhat.

Date Created
April 2015